UNITED STATES PATENT AND TRADEMARK OFFICE

Commissioner for Patents
United States Patent and Trademark Office
P.O. Box 1450
Alexandria, VA 22313-1450
www.uspto.gov

MARSHALL, GERSTEIN & BORUN LLP
6300 SEARS TOWER
233 S. WACKER DRIVE
CHICAGO IL 60606

In re Application of	:
Yan et al.	:
Serial No.: 09/908,943	: PETITION DECISION
Filed: July 19, 2001	:
Attorney Docket No.: 29915/00281A.US	:

This is in response to the petition under 37 CFR 1.181 and 1.144, filed March 15, 2004, requesting withdrawal of an improper restriction requirement. The delay in acting upon this petition is regretted.

BACKGROUND

A review of the file history shows that this application was filed on July 19, 2001, and contained claims 1-82. In a first Office action, mailed September 19, 2002, the examiner set forth a restriction requirement under 35 U.S.C. 121, as follows:

> Group 1, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 5, classified in class 530, subclass 327.
> Group 2, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 6, classified in class 530, subclass 326.
> Group 3, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 7, classified in class 530, subclass 327.
> Group 4, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 8, classified in class 530, subclass 328.
> Group 5, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 9, classified in class 530, subclass 328.
> Group 6, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 10, classified in class 530, subclass 328.
> Group 7, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 11, classified in class 530, subclass 328.
> Group 8, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 12, classified in class 530, subclass 328.

Group 9, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 13, classified in class 530, subclass 328.
Group 10, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 14, classified in class 530, subclass 328.
Group 11, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 15, classified in class 530, subclass 328.
Group 12, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 16, classified in class 530, subclass 328.
Group 13, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 17, classified in class 530, subclass 328.
Group 14, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 18, classified in class 530, subclass 328.
Group 15, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 120, classified in class 530, subclass 328.
Group 16, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 133, classified in class 530, subclass 328.
Group 17, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 134, classified in class 530, subclass 328.
Group 18, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 135, classified in class 530, subclass 328.
Group 19, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 136, classified in class 530, subclass 328.
Group 20, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 137, classified in class 530, subclass 328.
Group 21, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 138, classified in class 530, subclass 328.
Group 22, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 141, classified in class 530, subclass 328.
Group 23, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 143, classified in class 530, subclass 328.
Group 24, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 144, classified in class 530, subclass 328.
Group 25, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 145, classified in class 530, subclass 328.
Group 26, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 147, classified in class 530, subclass 328.
Group 27, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 148, classified in class 530, subclass 328.
Group 28, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 149, classified in class 530, subclass 328.
Group 29, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 150, classified in class 530, subclass 328.
Group 30, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 151, classified in class 530, subclass 328.
Group 31, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 152, classified in class 530, subclass 328.

Group 32, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 153, classified in class 530, subclass 328.
Group 33, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 154, classified in class 530, subclass 327.
Group 34, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 155, classified in class 530, subclass 326.
Group 35, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 156, classified in class 530, subclass 325.
Group 36, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 157, classified in class 530, subclass 324.
Group 37, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 158, classified in class 530, subclass 327.
Group 38, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 159, classified in class 530, subclass 326.
Group 39, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 160, classified in class 530, subclass 326.
Group 40, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 161, classified in class 530, subclass 324.
Group 41, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 162, classified in class 530, subclass 327.
Group 42, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 163, classified in class 530, subclass 326.
Group 43, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 164, classified in class 530, subclass 326.
Group 44, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 165, classified in class 530, subclass 324.
Group 45, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 166, classified in class 530, subclass 327.
Group 46, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 167, classified in class 530, subclass 326.
Group 47, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 168, classified in class 530, subclass 326.
Group 48, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 169, classified in class 530, subclass 324.
Group 49, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 190, classified in class 530, subclass 327.
Group 50, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 191, classified in class 530, subclass 326.
Group 51, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 192, classified in class 530, subclass 326.
Group 52, claims 1-20, 28-35, drawn to a peptide of SEQ ID NO: 193, classified in class 530, subclass 326.
Group 53, claims 21-27, drawn to a peptide wherein P2 is N, classified in class 530, subclass 330.
Group 54, claims 21-27, drawn to a peptide wherein P2 is S, classified in class 530, subclass 330.

Group 55, claims 21-27, drawn to a peptide wherein P2 is D, classified in class 530, subclass 330.
Group 56, claims 21-27, drawn to a peptide wherein P1 is Y, classified in class 530, subclass 330.
Group 57, claims 21-27, drawn to a peptide wherein P1 is L, classified in class 530, subclass 330.
Group 58, claims 21-27, drawn to a peptide wherein P1 is Nle, classified in class 530, subclass 330.
Group 59, claims 21-27, drawn to a peptide wherein P1' is E, classified in class 530, subclass 330.
Group 60, claims 21-27, drawn to a peptide wherein P1' is A, classified in class 530, subclass 330.
Group 61, claims 21-27, drawn to a peptide wherein P1' is D, classified in class 530, subclass 330.
Group 62, claims 21-27, drawn to a peptide wherein P2' is A, classified in class 530, subclass 330.
Group 63, claims 21-27, drawn to a peptide wherein P2' is V, classified in class 530, subclass 330.
Groups 64-126, claims 36-42 and 52-54, drawn to a polynucleotide that encodes the polypeptide of claims 1-35, a vector, a host cell and a method of producing a substrate for a B-secretase assay, classified in class 435, subclass 320.1 and 252.3 and class 536, subclass 232.1. The groups 64-126 correspond to groups 1-63.
Groups 127-189, claims 43-50, drawn to a method for assaying for modulators of B-secretase activity, a method of inhibiting B-secretase activity *in vivo*, classified in class 435, subclass 23. The groups 127-189 correspond to groups 1-63.
Groups 190-252, claims 51 and 55-57, drawn to a method of inhibiting the B-secretase activity *in vivo* comprising administering a modulator according to claim 50, a pharmaceutical composition comprising a modulator, a method of treating a disease comprising administering the pharmaceutical composition and the use of a modulator to treat Alzheimer's disease, classified in various classes and subclasses depending upon what the inhibitor is. The groups 190-252 correspond to groups 1-63.
Groups 253-315, claims 58-64, and 66-67, drawn to a method for identifying agents that inhibit Asp2 aspartyl protease and a method of identifying agents that modulate Asp2 aspartyl protease, classified in class 435, subclass 219. The groups 252-315 correspond to groups 1-63.
Groups 316-378, claims 65 and 68-69, drawn to a method of treating Alzheimer's disease comprising using an inhibitor of Hu-Asp2, classified in various classes and subclasses depending upon the identity of the inhibitor. The groups 316-378 correspond to groups 1-63.
Groups 379-441, claims 70-72, drawn to a kit for performing a B-secretase assay, classified in class 435, subclass 23. The groups 379-441 correspond to groups 1-63.
Group 442, claims 73-82, drawn to a peptide, classified in class 530, subclass 328, 327, 326, and 324.

The examiner agued the following:

Groups 1-63 and 64-126 are drawn to completely different chemical compounds that are patentably distinct. Groups 1-63 and 442 are drawn to different structural peptides and are patentably distinct.

Inventions 1-63 and 127-189 are related as product and process of use, and that, in the instant case, the product as claimed can be used in a materially different process such as in the methods of groups 190-252, 253-315, 316-378, and in the kit or groups of 379-441.

Inventions 1-63 and 190-252 are related as product and process of use, and that, in the instant case, the product as claimed can be used in a materially different process such as in the methods of groups 127-189, 253-315, 316-378, and in the kit or groups of 379-441.

Inventions 1-63 and 253-315 are related as product and process of use, and that, in the instant case, the product as claimed can be used in a materially different process such as in the methods of groups 127-189, 190-252, 316-378, and the kit or groups of 379-441.

Inventions 1-63 and 316-378 are related as product and process of use, and that, in the instant case, the product as claimed can be used in a materially different process such as in the methods of groups 127-189, 190-252, 316-378, and the kit or groups of 379-441.
Inventions 379-441 are drawn to a product (kit) that is patentably distinct from the products of groups 1-63 and 64-126.

Claim 33 is presumed to be drawn to a polypeptide instead of a fusion protein, since there is no antecedent basis for fusion protein in claims 28-32.

The examiner argued that the restriction is proper because the inventions are distinct for the reasons above and have acquired a separate status in the art as shown by their different classification and recognized divergent subject matter.

Applicants replied on November 19, 2002, electing Group 56, claims 21-27, drawn to a peptide of a generic sequence in which P1 is Y, with traverse, specifically arguing the examiner has failed to articulate a proper restriction requirement and that the invention should not be restricted 442 ways; and that the examiner has simply failed to establish that there is a serious burden to examine all of the claims. Applicants further argue that restriction practice under 35 USC 121 allows the Commissioner discretion to require restriction between two or more "independent and distinct" inventions and that in the present invention, the claims are not "independent". For example, the peptide/polypeptide subject matter of claims 1-35 and 73-82 is directly connected in design (i.e. The protein or peptide sequences all comprise a scissile bond that is cleaved by a human aspartyl protease), they operate in the same manner (i.e. the peptides are cleaved by human aspartyl protease), and have the same effect (i.e. mimic the effects of wild-type substrate for human aspartyl protease).

The examiner mailed a non-Final Office action to applicants on February 21, 2003, acknowledging applicants' election of Group 56, claims 21-27, wherein P1 is Y, and making the restriction requirement final. The examiner responded to the traversal by indicating, for example, that examining groups 1-35 and 73-82, as one group, as suggested by applicants would require the search of 52 different specific sequences as well as claims 1 and 21 that are drawn to a multitude of different peptides. Each of the peptides of claims 1-35 and 73-82 are structurally different and therefore properly restricted. The examiner further states that the search of 52

different sequences would, in itself, be an unreasonable burden upon the examiner, not taking into account the search of claims 1 and 21, which read on numerous embodiments.

Applicants replied on March 15, 2004 by filing this petition. Applicants filed a full reply to the Office action on May 21, 2003.

DISCUSSION

The application, file history and petition have been carefully considered.

Applicants state that the current restriction requirement is defective insofar as it specifies 442 overlapping groups such that individual species of the invention fall within multiple groups, and that it is impossible for restriction groups to be independent or distinct from one another when the same polypeptide falls within at least six of the groups. While this appears to be true, it is noted that such overlapping is the result of the extreme breadth of the claims. The examiner could have properly restricted each of the groups that encompassed a plurality of the peptides to a single specific peptide since each would have different structure and/or function although he did not choose to do so. Applicants further argue that the requirement is defective because it fails to clearly assign the entirety of the claimed subject matter to individual groups. For example, original claim 1 was split into fifty-two distinct groups which each define a particular peptide species, yet the claim actually encompasses more that 52 species. It is agreed that claim 1 reads on more than 52 individual species. It reads on 30,720 species. The examiner stated in the answer to the traversal that claims 1 and 21 read on a "multitude" of species but in order to simplify the restriction he chose not to further restrict. Applicants have suggested that the invention should be restricted to nine groups instead of the 442 groups suggested by the examiner; and that the examiner has simply failed to establish that there is a serious burden to examine all of the claims. However, it would be a very serious burden to restrict the invention in this manner as the nine groups proposed would read on 240 groups for the peptides only and each would not be limited to a single sequence. It would also put the peptide and nucleotides together. As to the argument that the groups must be both independent and distinct, there are two criteria for a proper requirement for restriction between patentably distinct inventions:

(A) the inventions must be independent (see MPEP 802.01, 806.04, 808.01) or distinct as claimed (see MPEP 806.05-806.05(i)); and

(B) There must be a serious burden on the examiner if restriction is required (see MPEP 803.02, 806.04(a)-806.04(i), 808.01(a), and 808.02).

In the instant case, the two criteria are met and the restriction is proper.

DECISION

The petition is **DENIED**. This application will be forwarded to the examiner for consideration of the amendment of March 19, 2004.

Should there be any questions about this decision please contact Marianne C. Seidel by letter addressed to Director, TC 1600, at the address listed above, or by telephone at 571-272-0584 or by facsimile sent to the general Office facsimile number, 703-872-9306.

Bruce M. Kisliuk
Director, Technology Center 1600